

VITAMIN CHRONOLOGY

	THIAMINE	ASCORBIC ACID	VITAMIN A	VITAMIN D	VITAMIN E	BIOTIN	RIBOFLAVIN	PYRIDOXINE	VITAMIN K	PANTOTHENIC ACID	CHOLINE	VITAMIN B ₁₂	FOLIC ACID	NICOTINIC ACID	INOSITOL
1897	Eijkman, Polyneuritis - chick														
1907		Holst, Frölich, scurvy - guinea pig													
1911	Funk, thiamine concentrate														
1913			McCullum, Osborne and Mendel, lipins -rats												
1915	McCullum, Davis, A rat factor		McCullum, Davis, A rat factor												
1916	McCullum, Kennedy, water-soluble B		McCullum, Kennedy, fat-soluble A												
1918															
1919			Steenbock, plant pigments-rat Palmer, Kempster, not carotinoid-chick	Huldschinsky UV Irradiation											
1920		Hart et al, not required by chick													
1922				McCullum et al, discovery-rat	Evans, Bishop, factor X-rat										
1923				Bethke et al, bone ash-rat											
1924				Steenbock, Black, irradiated food and D-rat	Sure, proposed name, Vitamin E	Boas, egg-white disease-rat									
1925				Hess et al, irradiated cholesterol-rat											
1926	Jansen, Donath, crystalline vitamin		Beach, deficiency -chick						Smith, Hendrick, evidence-rat						
1927				Rosenheim, Webster, ergosterol-rat											
1928								Hogan, Shrewsbury, Kempster, curled toes -chick	Hogan, Hunter, observed deficiency-rat						
1929			V. Euler et al, carotene					Chick, Roscoe, evidence-rat	Dam-chicks						
1930			Moore, conversion of carotene to A-rat	Mussehl, Ackerson, Massengale, Nusmeier, ergosterol not for chick		Norris, Ringrose, dermatitis-chick	Norris, Heuser, Wilgus, curled toes-chick			Norris, Ringrose dermatitis-chick					
1931					Pappenheimer, Goettsch, deficiency-chick	György, vitamin H -rat									
1932		King, isolation								Kline, Keenan et al, ration, dry heat dermatitis-chick	Best, Huntsman, fatty liver-rat	Byerly, Titus, Ellis, animal protein for laying hens			
1933							Kuhn et al, isolation			Holst, Halbrook, deficiency disease -chick					
1934				Waddell, irradiated cholesterol-rat -chick						Dam, discovery of vitamin K-chick					
1935				Windaus 7-dehydro-cholesterol			Kuhn et al, synthesis	György evidence B ₆ -rat			Elvehjem, Koehn antidermatitis factor -chick			Wills, Day,-monkey	
1936	Williams, Cline, structure, synthesis				Goettsch and Pappenheimer, vegetable oil -chick Evans, the Emersons, isolation	Kögl, Tönnis, crystalline	Lepkovsky, Jukes, crystalline B ₂ -chick		Dam et al, low prothrombin	Lepkovsky, Jukes, Krause, factor 2-rat-chick		Nestler et al, hatchability factor			
1937															Elvehjem et al, black tongue-dog
1938	Lipschitz, Potter, Elvehjem function				Dam et al, -tocopheral for the chick			Lepkovsky, György, Keresztesy, isolation Eckardt, pyridoxine		Williams et al, a concentrate			Stokstad, Manning, factor U-chick		
1939									Almquist, Klose, Phthiocol, K ₃ , Dolsy group, isolation		Griffith, hemorrhagic, kidneys -rat				
1940	Jukes, Heitman, symptoms of a deficiency					György et al, vitamin H is biotin-rat					Abbott, DeMasters, -chick Hogan et al, perosis, a deficiency disease, Jukes, perosis and choline-chick		Hogan, Parrott, vitamin B ₁₂ -chick		Woolley -mice
1941					Eakin, Snell, Williams, avidin-chick								Mitchell, Williams folic acid		
1942						Richardson, Hogan, Miller, perosis-chick						Johnson, Carrick, Casein, extract for the chick	Mills, Briggs, et al, L casei factor	Briggs, Mills, et al, required-chick	
1943													O'Dell, Hogan, Properties. Pfiffner et al, Stokstad, isolation		
1944												Hammond, manure factor-chick			
1946												Cary, et al, factor X-rat		Briggs, Groschke, et al tryptophane and nicotinic acid	
1947												Shorb, LLD factor			
1948												Folkers group isolation Oit required by chick			